AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (currently amended) A ~~composition of matter~~ particle for ~~feeding to~~ animal feed for a ruminant, said ~~composition being a pellet comprising particles compressed together via pelletization, each of said particles containing choline chloride to be administered in a rumen-protected and post-ruminally effective form, each~~ particle comprising a core, a first layer surrounding the core, and a second layer surrounding the first layer, said core comprising choline chloride and binder, ~~which contains choline chloride and a protective coating surrounding the core which provides effective protection of the choline chloride from ruminal activity while allowing effective release of the choline chloride into the post-rumen portion of the digestive tract of the ruminant, wherein the~~ said core mainly ~~consists~~ consisting of choline chloride in the form of a dry, crystalline powder, the layers together being effective to protect the choline chloride from ruminal activity while allowing effective release of the choline chloride into the post-rumen portion of the digestive tract of the ruminant, the first ~~and, in combination, the protective coating surrounding the core comprises an outer, continuous layer mainly consisting of carnauba wax and an inner, continuous~~ layer consisting essentially of a hydrophobic substance selected from the group consisting of vegetable oils, hydrogenated vegetable oils, stearic acid and mixtures thereof, said ~~inner~~ first layer providing effective protection of the choline chloride from moisture, the second layer mainly consisting of carnauba wax, said second layer being effective to protect the core and the first layer from degradation from abrasion, pressure and mechanical and thermal stress encountered during mixing and pelletization of said particles into an animal feed pellet.

2. (currently amended) ~~A composition of matter as claimed in~~ The particle of claim 1, wherein the dry, crystalline powder of choline chloride is composed [[by]] of micronized crystals having a predetermined distribution of particle size.

3. (currently amended) ~~A composition of matter as claimed in~~ The particle of claim 2, wherein the average particle size of the micronized crystals ranges from 100 micrometers to 300 micrometers.

4. (currently amended) ~~A composition of matter as claimed in~~ The particle of claim 2, wherein the average particle size of the micronized crystals is 200 micrometers.

5. (currently amended) ~~A composition of matter as claimed in~~ The particle of claim 1, wherein the amount of dry, crystalline powder of choline chloride in the core ranges from 80% to 95% by weight of the core.

6. (currently amended) ~~A composition of matter as claimed in~~ The particle of claim 1, wherein the amount of dry, crystalline powder of choline chloride in the core ranges from 85% to 90% by weight of the core.

7. (currently amended) ~~A composition of matter as claimed in~~ The particle of claim 1, wherein the core further comprises a predetermined amount of ~~additional substances~~ a flow modifier.

8. (cancelled)

9. (currently amended) ~~A composition of matter as claimed in~~ The particle of claim [[8]] 7, wherein the flow modifier comprises one or more compounds ~~chosen in~~ selected from the family of silicates.

10. (currently amended) ~~A composition of matter as claimed in~~ The particle of claim 9, wherein the flow modifier comprises one or more compounds ~~chosen in~~ selected from the group of alluminosilicates.

11. (currently amended) ~~A composition of matter as claimed in~~ The particle of claim [[8]] 7, wherein the flow modifier comprises one or more compounds ~~chosen in~~ selected from the group consisting of zeolites, silica, and perlite.

12. (currently amended) ~~A composition of matter as claimed in~~ The particle of claim [[8]] 7, wherein the amount of flow modifier in the core ranges from 3% to 8% by weight of the core.

13. (currently amended) ~~A composition of matter as claimed in~~ The particle of claim [[8]] 7, wherein the amount of flow modifier in the core is equal to 3% by weight of the core.

14. (currently amended) ~~A composition of matter as claimed in~~ The particle of claim [[8]] 7, wherein the amount of flow modifier in the core is equal to 8% by weight of the core.

15. (currently amended) ~~A composition of matter as claimed in~~ The particle of claim [[7]] 1, wherein the ~~additional substances comprise a predetermined amount of a~~ binder ~~acting~~ acts as a moisture barrier.

16. (currently amended) ~~A composition of matter as claimed in~~ The particle of claim 15, wherein the binder ~~acting as a moisture barrier~~ comprises one or more compounds ~~chosen in~~ selected from the family of stearates.

17. (currently amended) ~~A composition of matter as claimed in~~ The particle of claim 16, wherein the binder ~~acting as a moisture barrier~~ comprises one or more compounds ~~chosen among~~ selected from zinc stearate, magnesium stearate and calcium stearate.

18. (currently amended) ~~A composition of matter as claimed in~~ The particle of claim [[15]] 1, wherein the amount of binder ~~acting as a moisture barrier~~ in the core is equal to 7% by weight of the core.

19. (cancelled)

20. (currently amended) ~~A composition of matter as claimed in~~ The particle of claim [[19]] 1, wherein: the core contains 90% by its weight of dry crystalline choline chloride in the form of micronized crystals, the remaining 10% by weight of the core being composed [[by]] of a flow modifier consisting of silica in an amount of 3% by weight of the core and by [[a]] the binder acting as a moisture barrier consisting of calcium stearate in an amount of 7% by weight of the core; the core ~~represents~~ representing 39.0% by weight of the final particle; the ~~whole protective coating represents~~ first and second layers together representing 61.0% by weight of the final particle; the ~~inner, continuous~~ first layer is composed solely by hydrogenated soybean oil as hydrophobic substance; the ~~outer, continuous~~ second layer is completely composed by carnauba wax; the ~~inner~~ first layer represents 60% by weight of the ~~protective coating material~~ two layers and [[the]] 36.6% by weight of the final particle; the ~~outer~~ second layer represents 40% by weight of the ~~protective coating material~~ two layers, and 24.4% by weight of the final

particle; the final particle having a particle size ranging from 400 micrometers to 1200 micrometers.

21. (currently amended) ~~A composition of matter as claimed in~~ The particle of claim [[19]] 1, wherein: the core contains 90% by its weight of dry crystalline choline chloride in the form of micronized crystals, the remaining 10% by weight of the core being composed [[by]] of a flow modifier consisting of silica in an amount of 3% by weight of the core and by [[a]] the binder acting as a moisture barrier consisting of calcium stearate in an amount of 7% by weight of the core; the core ~~represents~~ representing 44.2% by weight of the final particle; the ~~whole protective coating represents~~ first and second layers together representing 55.8% by weight of the final particle; the ~~inner, continuous~~ first layer is composed solely by hydrogenated soybean oil as hydrophobic substance; the ~~outer, continuous~~ second layer is composed solely by carnauba wax; the ~~inner~~ first layer represents 55% by weight of the ~~protective coating~~ two layers and ~~the~~ 30.7% by weight of the final particle; the ~~outer~~ second layer represents 45% by weight of the ~~protective coating~~ two layers, and 25.1% by weight of the final particle; the final particle ~~in the composition of matter~~ having a particle size ranging from 200 micrometers to 1000 micrometers.

22. (currently amended) ~~A composition of matter as claimed in~~ The particle of claim [[7]] 1, wherein the amount of ~~additional substances~~ choline chloride in the core is ~~lower~~ greater than or ~~at most~~ equal to ~~20%~~ 80% by weight of the core.

23. (currently amended) ~~A composition of matter as claimed in~~ The particle of claim [[7]] 1, wherein the amount of ~~additional substances~~ choline chloride in the core is equal to ~~15%~~ 85% by weight of the core.

24. (currently amended) ~~A composition of matter as claimed in~~ The particle of claim [[7]] 1, wherein the amount of ~~additional substances~~ choline chloride in the core ranges from ~~1% to 10%~~ 99% to 90% by weight of the core.

25. (currently amended) ~~A composition of matter as claimed in~~ The particle of claim [[7]] 1, wherein the amount of ~~additional substances~~ choline chloride in the core ranges from ~~2% to 8%~~ 98% to 92% by weight of the core.

26. (currently amended) ~~A composition of matter as claimed in~~ The particle of claim [[7]] 1, wherein the amount of ~~additional substances~~ choline chloride in the core is ~~7%~~ 93% by weight of the core.

27. (currently amended) ~~A composition of matter as claimed in~~ The particle of claim 1, wherein the core has a weight ranging from 30% to 70% by weight of the whole particle.

28. (currently amended) ~~A composition of matter as claimed in~~ The particle of claim 1, wherein the core has a weight ranging from 40% to 50% by weight of the whole particle.

29. (currently amended) ~~A composition of matter as claimed in~~ The particle of claim 1, wherein the amount of carnauba wax in the ~~outer~~ second layer ranges from 80% to 100% by weight of the ~~outer~~ second layer itself.

30. (currently amended) ~~A composition of matter as claimed in~~ The particle of claim 1, wherein the amount of carnauba wax in the ~~outer~~ second layer ranges from 90% to 95% by weight of the ~~outer~~ second layer itself.

31. (currently amended) ~~A composition of matter as claimed in~~ The particle of claim 1, wherein the ~~outer~~ second layer further comprises a predetermined amount of a rigidity controlling agent ~~mixed with carnauba wax~~ to control the rigidity of the ~~outer~~ second layer.

32. (currently amended) ~~A composition of matter as claimed in~~ The particle of claim 31, wherein the predetermined amount of the rigidity controlling agent is lower than or ~~at most~~ equal to 20% by weight of the ~~outer~~ second layer.

33. (currently amended) ~~A composition of matter as claimed in~~ The particle of claim 31, wherein the predetermined amount of the rigidity controlling agent ranges from 5% to 10% by weight of the ~~outer~~ second layer.

34. (currently amended) ~~A composition of matter as claimed in~~ The particle of claim 31, wherein the rigidity controlling agent is a plasticizer.

35. (currently amended) ~~A composition of matter as claimed in~~ The particle of claim 31, wherein the rigidity controlling agent comprises one or more lipids.

36. (currently amended) ~~A composition of matter as claimed in~~ The particle of claim 35 wherein the one or more lipids are selected from the family of vegetable oils.

37. (currently amended) ~~A composition of matter as claimed in~~ The particle of claim 35 wherein the one or more lipids are selected from the group consisting of palm oil and soybean oil.

38. (currently amended) ~~A composition of matter as claimed in~~ The particle of claim 35 wherein at least one of the one or more lipids is a hydrogenated vegetable oil.

39. (currently amended) ~~A composition of matter as claimed in~~ The particle of claim 31, wherein the core further comprises a predetermined amount of ~~additional substances~~ a flow modifier.

40. (cancelled)

41. (currently amended) ~~A composition of matter as claimed in~~ The particle of claim 39, wherein the ~~additional substances comprise a predetermined amount of a~~ binder ~~acting~~ acts as a moisture barrier.

42. (cancelled)

43. (currently amended) ~~A composition of matter as claimed in~~ The particle of claim [[42]] 39, wherein: the core contains 90% by its weight of dry crystalline choline chloride in the form of micronized crystals, the remaining 10% by weight of the core being composed [[by]] of a flow modifier constituted by silica in an amount of 3% by weight of the core and by [[a]] the binder acting as a moisture barrier constituted by magnesium stearate in an amount of 7% by weight of the core; the core ~~represents~~ representing 45.50% by weight of the final particle; the ~~whole protective coating represents~~ first and second layers together representing 54.50% by weight of the final particle; the ~~inner, continuous~~ first layer [[is]] being composed solely by hydrogenated palm oil as hydrophobic substance; the ~~outer, continuous~~ second layer [[is]] being composed by

carnauba wax in an amount of 90% by weight of the ~~outer~~ second layer and by soybean oil as a rigidity controlling agent in an amount of 10% by weight of the ~~outer~~ second layer; the ~~inner~~ first layer ~~represents~~ representing 70% by weight of the ~~protective coating~~ two layers and ~~the~~ 38.15% by weight of the final particle; the ~~outer~~ second layer ~~represents~~ representing 30% by weight of the ~~protective coating~~ two layers, and 16.35% by weight of the final particle; the final particle ~~in the composition of matter~~ having a particle size ranging from 300 micrometers to 1200 micrometers.

44. (currently amended) ~~A composition of matter as claimed in~~ The particle of claim [[42]] 39, wherein: the core contains 85% by its weight of dry crystalline choline chloride in the form of micronized crystals, the remaining 15% by weight of the core being composed [[by]] of a flow modifier comprising perlite and silica, respectively in an amount of 3% and 5% by weight of the core, and by [[a]] the binder acting as a moisture barrier constituted by calcium stearate in an amount of 7% by weight of the core; the core ~~represents~~ representing 47.2% by weight of the final particle; the ~~whole protective coating represents~~ first and second layers together representing 52.8% by weight of the final particle; the ~~inner, continuous~~ first layer [[is]] being composed solely by hydrogenated soybean oil as hydrophobic substance; the ~~outer, continuous~~ second layer [[is]] being composed by carnauba wax in an amount of 90% by weight of the ~~outer~~ second layer and by palm oil as a rigidity controlling agent in an amount of 10% by weight of the ~~outer~~ second layer; the ~~inner~~ first layer ~~represents~~ representing 55% by weight of the ~~protective coating~~ two layers and ~~the~~ 29.0% by weight of the final particle; the ~~outer~~ second layer ~~represents~~ representing 45% by weight of the ~~protective coating~~ two layers, and 23.8% by weight of the final particle; the final particle ~~particles in the composition of matter~~ having a particle size ranging from 400 micrometers to 1200 micrometers.

45. (currently amended) ~~A composition of matter as claimed in~~ The particle of claim [[42]] 39, wherein: the core contains 85% by its weight of dry crystalline choline chloride in the form of micronized crystals, the remaining 15% by weight of the core being composed [[by]] of a flow modifier comprising perlite and silica, respectively in an amount of 3% and 5% by weight of the core, and by [[a]] the binder acting as a moisture barrier consisting of calcium stearate in an amount of 7% by weight of the core; the core ~~represents~~ representing 47.75% by weight of the final particle; ~~The whole protective coating represents~~ the first and second layers together representing 52.25% by weight of the final particle; ~~the~~ ~~inner, continuous~~ first layer [[is]] being composed solely by hydrogenated soybean oil as hydrophobic substance; the ~~outer, continuous~~

second layer [[is]] being composed by carnauba wax in an amount of 95% by weight of the ~~outer~~ second layer and by palm oil in an amount of 5% by weight of the ~~outer~~ second layer; the ~~inner~~ first layer ~~represents~~ representing 50% by weight of the ~~protective coating~~ two layers and ~~the~~ 26.125% by weight of the final particle; the ~~outer~~ second layer ~~represents~~ representing 50% by weight of the ~~protective coating~~ two layers, and 26.125% by weight of the final particle; the final ~~particles in the composition of matter~~ particle having a particle size ranging from 400 micrometers to 1200 micrometers.

46. (currently amended) ~~A composition of matter as claimed in~~ The particle of claim 1, wherein the ~~outer continuous~~ second layer constitutes a percentage by weight of the ~~protective coating~~ two layers which ranges from 30% to 60%.

47. (currently amended) ~~A composition of matter as claimed in~~ The particle of claim 1, wherein the ~~outer continuous~~ second layer constitutes a percentage by weight of the ~~protective coating~~ two layers which ranges from 45% to 55%.

48. (currently amended) ~~A composition of matter as claimed in~~ The particle of claim 1, wherein the ~~inner, continuous~~ first layer constitutes a percentage by weight of the ~~protective coating~~ two layers which ranges from 40% to 70%.

49. (currently amended) ~~A composition of matter as claimed in~~ The particle of claim 1, wherein the ~~inner continuous~~ first layer constitutes a percentage by weight of the ~~protective coating~~ two layers which ranges from 45% to 55%.

50-51. (cancelled)

52. (currently amended) ~~A composition of matter as claimed in~~ The particle of claim 1 wherein the hydrophobic substance is selected from the group consisting of palm oil and soybean oil.

53-54. (cancelled)

55. (currently amended) ~~A composition of matter as claimed in~~ The particle of claim 1, wherein the ~~protective coating~~ two layers constitutes a percentage by weight of the whole particle which ranges from 30% to 70%.

56. (currently amended) ~~A composition of matter as claimed in~~ The particle of claim 1, wherein the ~~protective coating~~ two layers constitutes a percentage by weight of the whole particle which ranges from 50% to 60%.

57. (currently amended) A feed pellet containing a ~~composition of matter~~ particle as claimed in anyone of ~~the previous~~ claims ~~from 1 to 56~~ 1-7, 9-18, 20-39, 41, 43-49, 52 and 55-56.

58. (currently amended) A premix for feed containing a ~~composition of matter~~ particle as claimed in ~~anyone~~ any one of [[the]] claims ~~from 1 to 56~~ 1-7, 9-18, 20-39, 41, 43-49, 52 and 55-56.

59. (currently amended) Mash feed in unpelletted form, containing a ~~composition of matter~~ particle as claimed in ~~anyone~~ any one of ~~the~~ claims ~~from 1 to 56~~ 1-7, 9-18, 20-39, 41, 43-49, 52 and 55-56.